

Remarks/Arguments

Reconsideration of the above-identified patent application in view of the present amendment and the following remarks is respectfully requested.

Claims 1-23 are currently pending in this application. The Office Action dated February 24, 2005 rejected claims 5, 6, 16, and 17 as indefinite under 35 U.S.C. §112. Claims 1-4, 7, 9-14, and 20-23 were rejected under 35 U.S.C. §102 as anticipated by U.S. Patent No. 5,835,613 to Breed et al. (hereinafter "Breed"). Claims 8, 15, and 19 were rejected under 35 U.S.C. §103 as obvious in light of Breed. Claims 5, 6, 16, and 17 were rejected under 35 U.S.C. §103 as obvious in light of Breed, in view of U.S. Patent No. 6,099,030 to Kraft and in further view of U.S. Patent No. 6,137,623 to Roberson et al (hereinafter "Roberson"). Claim 18 has been indicated as containing allowable matter.

After careful consideration of the Office Action, claims 1, 5-7, 16, 17, and 22 have been amended. Claims 3 and 4 have been cancelled. It is respectfully submitted that claims 1, 2, and 5-23 are patentable over the cited art in light of the present amendment.

Claims 5, 6, 16, and 17 were rejected as indefinite under 35 U.S.C. §112, second paragraph for failing to properly define the acronym "MEM." These claims have been amended to recite "microelectronic machine" in place of "MEM." It is thus respectfully requested that this amendment to the claims overcomes the rejection under 35 U.S.C. §112, second paragraph.

With regard to the rejection of claim 1 as being anticipated by Breed, it is respectfully submitted that claim 1, as amended, patentably defines over Breed. Specifically, Breed fails to disclose a moveable reflective member, as recited in

claim 1. The Office Action recites the occupant as providing the cited moveable reflective member, but it will be appreciated that claim 1, as amended, recites a moveable reflective member for directing a beam at a scan area located at an occupant's seating location of the vehicle. As such, the moveable reflective member of claim 1 may not be the occupant and, thus a reflective surface other than the occupant is required. Breed discloses using the windshield to reflect light at the occupant. The windshield, however, is not movable relative to the vehicle and thus, may not be the moveable reflective member of claim 1. Kraft and Roberson fail to remedy the deficiencies of Breed. Therefore, it is respectfully submitted that claim 1 is allowable over the cited art and allowance of claim 1 is respectfully requested.

Claims 2 and 5-13 depend from claim 1, and are thus allowable for the reasons described above, as well as, for their own unique features. Therefore, allowance of claims 2 and 5-13 is respectfully requested.

Claim 22 recites a method that has been amended in a manner similar to claim 1. Therefore, it is respectfully suggested that claim 22 is allowable for reasons similar to those set forth above with regard to claim 1. Thus, allowance of claim 22 is respectfully requested.

Claim 14 recites a vehicle occupant sensor apparatus comprising beam means for emitting a beam. Modulation means modulate the beam. Scan means direct the beam toward the occupant in a pattern that moves across a plurality of points on the occupant. Receiver means receive reflection of the beam from the occupant. Phase determination means determine a phase difference between the emitted beam and the reflection associated with each point on the occupant. Map means map a contour and location representation of the occupant using the

determined phase differences. Characteristic determination means determine at least one occupant characteristic of the occupant using the contour and location representation of the occupant.

It is respectfully submitted that Breed fails to teach or suggest means for directing a beam toward the occupant in a pattern that moves across a plurality of points on the occupant. The Breed system simply illuminates the occupant in infrared light and captures the resulting image at a charge coupled devices. Breed fails to teach or suggest directing a beam of light toward an occupant in a pattern that moves across a plurality of points on the occupant. The Office Action cites Figs. 1A–2 of Breed as providing this teaching, but the applicant respectfully submits that these figures provide only a general teaching of illuminating the occupant via an infrared light source and imaging the interior of the vehicle via a charge coupled device. No movement of a beam across the occupant is taught by Figs. 1A-2 of Breed. Therefore, allowance of claim 14 is respectfully requested.

Similarly, Breed lacks a map means that maps a contour and location representation of the occupant using the determined phase differences. The Office Action cites the device illustrated in Fig. 4 of Breed as providing this teaching. The device discussed in conjunction with Fig. 4 of Breed is an occupant position sensor, similar to the range finder that is discussed generally at Col. 14, lines 3 – 17 of Breed. The range finder can replace one of the charge coupled devices in a stereo imaging system to allow the position of the occupant to be determined once a feature of interest (*e.g.*, the eyes) of the occupant have been located using the remaining charge coupled device. There is no teaching of using the phase difference for mapping a contour and location representation of the occupant. This is further

emphasized by Breed's discussion of occupant recognition, as the outputs of the charge coupled devices of Breed serve as the input to the pattern recognition system disclosed in Breed (Col. 16, lines 54–56). Thus, Breed fails to teach or suggest a contour map constructed from a plurality of determined phase differences, as recited in claim 14. Neither Kraft nor Robinson remedies this deficiency. Accordingly, it is respectfully submitted that claim 14 is patentable over the cited art, and allowance of claim 14 is respectfully requested.

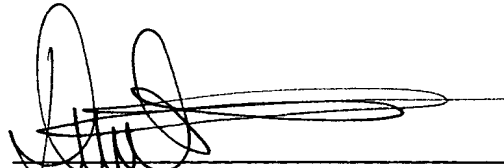
Claims 15-21 depend from claim 14 and are allowable for the reasons described above with regard to claim 14 as well as for their own unique features. Therefore, allowance of claims 15-21 is respectfully requested.

Claim 23 is a method claim having limitations similar to those of claim 14. It is respectfully submitted that claim 23 is allowable for reasons similar to those described above with regard to claim 14. Therefore, allowance of claim 23 is respectfully requested.

In view of the foregoing, it is respectfully submitted that the above-identified patent application is in condition for allowance, and allowance of the above-identified patent application is respectfully requested.

Please charge any deficiencies or credit any overpayment in the fees for this amendment to our Deposit Account No. 20-0090.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Daniel J. Whitman', is written over a horizontal line.

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